

iety and memory disturbances such as retained misperceptions of the event and omen formation. In contrast to adults, children are apparently not subject to amnesia or significant denial of the external reality of a violent event. Adolescents, in particular, remain distressed over their vulnerability during an incident. Youngsters may engage in suppressing conscious thoughts about the event as a device to avoid feelings of embarrassment and anxiety. Prominent personality alterations have been reported, including the emergence of "survivor identity" and delinquency. A common finding is an enduring sense of pessimism with a belief in a shortened life expectancy and recurrent dreams of personal death. Some traumatized children have become suicidal or have manifested full depressive episodes. The prognosis for child victims of terrorism will, in a large measure, depend on the family's and community's coping resources and the availability of psychiatric treatment.

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### Children at Risk—New Aspects

PREVENTING MENTAL ILLNESS has been at the roots of child and adolescent psychiatry. Its time has come. There will never be enough psychiatrists to care for the mental health needs of the nation. There has been increasing research in the field of risk that has promise for implementing a prevention program. Although correlation is not causation, there is a relationship between risk and a series of spectral outcomes that occur in adolescence and early adulthood. For instance, it has been shown that continued aggressive and asocial behavior in preschool children is a risk factor for later delinquency and that the fetal alcohol syndrome is a predictor of poor school performance and mild mental retardation. Risk factors in children are predictors of a wide variety of later disorders. Common risk factors in families and children are psychotic parents, depressed parents, divorce and parental disharmony, alcoholism or substance abuse in family, conduct disorders, sexual and physical abuse, loss and separation, mental retardation, chronic illness and poverty.

Risk factors that develop in adolescence, such as teenaged pregnancy and substance abuse, may be risk factors for the next generation of children. Significant outcomes for risk factors are substance abuse, delinquency, suicide and homicide, school dropout, teenaged pregnancy, psychoses and depression and learning disabilities.

Children who are victims of natural disasters, such as "acts of God," or those who witness murder, rape or beatings of a parent or sibling are at risk for the posttraumatic stress disorder. Early intervention is essential for prevention. Physicians often see divorced parents or parents who need to be admitted to hospital for mental or physical illness but do not pay sufficient attention to the plight of the children in these

situations. Often these children will benefit from counseling or therapy. Research will continue to define risk factors and proper interventions. Preschool day care, early periodic screening and developmental testing are preventive programs that need to be developed. Research and interventive programs will have an impact on the prevalence and incidence of mental illness in our society. Physicians need to be aware of opportunities for prevention.

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### Family Involvement in Managing Schizophrenia

SCHIZOPHRENIA is a severe and disabling illness with a prevalence of about 1% around the world. Symptoms include looseness of associations, delusions and auditory hallucinations, which usually begin in the second or third decade of life and in about two out of three patients persist or become more severe throughout life. Antipsychotic medications are effective at controlling some of these symptoms, but their use involves a one in five risk of tardive dyskinesia, and patients often remain less symptomatic but severely impaired in their ability to carry on the activities of a normal life.

Some decades ago, families were thought to be implicated as a causal agent in schizophrenia. It was believed that double-binding communication patterns created the disease in children. Recent research, however, on the genetics of schizophrenia among twins and adoptive offspring indicates a strong but non-Mendelian genetic factor in schizophrenia. Having a biologic parent with schizophrenia raises the risk of getting the disease from about 1% to 7%.

Attention in family research shifted from causation to patient adjustment. A factor identified as "expressed emotion" was found to be predictive of decompensation among schizophrenic patients. This concept had two components: criticism and overinvolvement. More recently, an aspect of family environment that prevents rather than promotes relapse was identified. This variable, with the similar name "expressiveness," consists of a family's tendency to solve problems together rather than separately, to share information. Schizophrenic persons from families with high scores on the expressiveness subscale of the Family Environment Scale are less likely to be readmitted to hospital.

These observations have led to various new interventions with families of persons with schizophrenia variously labeled "sociotherapy," "psychoeducation" and "family therapy." These interventions have been designed to teach families about the illness, the importance of a consistent antipsychotic medication regimen, the warning signs of decompensation, ways to provide consistent structure in a patient's daily activities and means of reducing abrasive contact between patient and family, thereby reducing the hostility and overinvolvement that has been found to provoke decompensation. Several of these studies have shown success in changing the family atmosphere and reducing decompensation. Schizophrenic pa-